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**MICHAEL J. PAHUTSKI**  
Counsel

VIA OVERNIGHT MAIL

**CINERGY**

July 6, 2004

Iris Skidmore  
Office of Legal Services  
Kentucky Division of Energy  
Environmental and Public Protection Cabinet  
Fifth Floor, Capital Plaza Tower  
Frankfort, Kentucky 40601

**RECEIVED**

JUL 07 2004

PUBLIC SERVICE  
COMMISSION

Re: Case No. 2004-00014

Dear Counsel Skidmore:

Enclosed please find The Union Light, Heat and Power Company's responses to the Kentucky Division of Energy's First Request for Information.

Should you have any questions, please feel free to contact me at (513) 287-3075.

Sincerely,



Michael J. Pahutski

MJP/mak

Enclosure

Cc: Elizabeth O'Donnell  
Executive Director  
Kentucky Public Service Commission

Elizabeth Blackford  
Assistant Attorney General  
Kentucky Attorney General's Office



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-001**

**REQUEST:**

1. On page 1-9 the IRP refers to "customer-specific contract options" and describes a contract with one industrial customer for loading interruption up to 3 MW.
  - a. What was the sequence of events leading to the contract being signed with this customer?
  - b. What is the procedure for customers wishing to enter into individual contracts? How does ULH&P decide which customers it will contract with?
  - c. Are there other such contracts with individual customers? If so, please provide a description of each one.

**RESPONSE:**

- a) The contract was prepared and signed in December 1993. This originated out of the Company's efforts to encourage customers to reduce peak loads using ULH&P's Rider IS. The interruptible rate rider has been in effect since 1985.
- b) ULH&P no longer enters into interruptible contracts with customers. ULH&P encourages any customer who is willing and able to shed load during high price periods to participate in ULH&P's PowerShare program. ULH&P's PowerShare program is the "brand" name ULH&P has used in administering its KyPSC-approved rate schedules Rider PLM – Peak Load Management Program and Rider EOP-RTP – Energy Call Option Program.
- c) ULH&P has no other interruptible contracts.

**WITNESS RESPONSIBLE:**

Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-002**

**REQUEST:**

2. In reference to the two-part real-time pricing (RTP) tariff described on page 1-10, please describe how this tariff was developed and when it went into effect.

**RESPONSE:**

ULH&P's Rate RTP, Experimental Real Time Pricing Program, Original Sheet No. 71 went into effect on March 24, 1997. The program was offered on an experimental basis through December 31, 2000. The tariff sheet was issued again in late 1998 as Original Sheet No. 99, with the same termination date of December 31, 2000.

The program was continued under Rate RTP, Real Time Pricing Program, First Revised Sheet No. 99 that was effective with January 2001 bills. This sheet specified that the program would be offered on an experimental basis through December 31, 2003.

During late 2003, the Company filed an application to extend the program through June 2004 (Second Revised Sheet No. 99). The Company subsequently filed an application to extend the program again, with a termination date of December 31, 2004 (Third Revised Sheet No. 99).

ULH&P modeled its RTP program on The Cincinnati Gas & Electric Company's RTP program, which had been in effect since 1996. CG&E's program was based on two-part RTP program concepts developed by EPRI. CG&E also worked with a consultant to design the program. During 1995, members of the CG&E DSM Collaborative, which included representatives of commercial and industrial companies, reviewed and approved the two-part RTP program concept. The ULH&P C&I Collaborative approved the program prior to its adoption by ULH&P.

**WITNESS RESPONSIBLE:**

Jim Ziolkowski



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-003**

**REQUEST:**

3. On June 2, 2004, ULH&P filed a request to extend the RTP tariff while it performs an evaluation concerning its possible future modification or termination. Commission Order, June 14, 2004, Case No. 2004-00210. What factors would lead ULH&P to propose termination of the RTP program?

**RESPONSE:**

The factors that might lead ULH&P to propose termination of the RTP program include:

- Small amounts of demand reduction provided by RTP program participants during peak periods.
- High costs to ULH&P in terms of lost revenue versus the standard rates to achieve the peak period demand reductions.
- ULH&P's costs to administer the RTP program.

**WITNESS RESPONSIBLE:**

Jim Ziolkowski



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-004**

**REQUEST:**

4. On page 3-21 the IRP discusses cogeneration. In ULH&P's previous IRP filed in November, 1999, the alliance with Trigen Energy was mentioned.
- a. Please describe the course of Cienrgy's business relationship with Trigen Energy since that date and whether Cienrgy/ULH&P still has a partnership that provides cogeneration development services.
  - b. Did Trigen Energy develop any cogeneration projects in the ULH&P service territory? If so, please describe those projects including quantitative information.
  - c. During the time when Cienrgy had an alliance with Trigen Energy, was a study, estimate, or other assessment developed of the potential for cogeneration in the ULH&P service territory? If so, please provide a copy of this study.

**RESPONSE:**

(a) In early 2000, Trigen Energy's largest shareholder, Suez Lyonnaise Des Eaux (Suez), issued a successful tender for the common stock of Trigen Energy. Within a short time after the takeover, Suez replaced a large number of the senior management team of Trigen Energy. As Cienrgy Solutions worked with the new Suez appointed management team it became clear that the new Trigen development philosophy and that of Cienrgy Solutions were no longer in alignment. Trigen wanted the option to develop projects under their own name and they were under pressure to source all aspects of a project that could be performed by a Suez entity to that entity without regard to competitiveness. In May 2001, Trigen Energy and Cienrgy Solutions entered into an agreement to end the "exclusivity" portion of the development agreement and all new joint development ceased. Cienrgy Solutions and Trigen Energy continued to jointly develop certain projects that were in the development process and to this day continue to jointly own a number of energy facilities. Cienrgy Solutions is actively engaged in cogeneration development today, but not with Trigen Energy.

(b) In August 1999, Trigen Energy, Cienrgy Solutions and Lafarge Gypsum, Inc. entered into agreements for the construction, financing and operation of a cogeneration facility in Silver Grove, Kentucky. Lafarge leases the equipment under an equipment lease agreement and Trigen-Cienrgy Solutions of Silver Grove, LLC provides operations and maintenance services. The project consisted of a General Electric GE5 gas turbine with the gas turbine hot exhaust used for direct process drying of Lafarge's raw product. The gas turbine exhausts directly into a process cage mill. The Project supplied approximately 45 mmbtus per hour of exhaust heat from the turbine and approximately

5.2 MW of electricity to Lafarge. The Lafarge project is a PURPA Qualified Facility (QF).

(c) Cinergy Solutions is not aware of any study, estimate or other assessment of the potential for cogeneration in the ULH&P Service territory, generally that was developed or prepared during Cinergy Solutions' alliance with Trigen Energy. Cinergy Solutions and Trigen Energy obviously prepared a specific proposal that was submitted to Lafarge Gypsum, Inc. in connection with the Project described in response to 4. (b) above.

**WITNESS RESPONSIBLE:** Steve Harkness



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-005**

**REQUEST:**

5. The subsection on cogeneration begins, "Cogeneration technology is viewed as most relevant to the industrial class of service." IRP, page 3-21.
  - a. Was this assumption based on any analysis or assessment of the market? If so, please provide this analysis.
  - b. Has ULH&P studied the applicability of cogeneration in commercial buildings? If so, please provide this study.

**RESPONSE:**

a) No.

b) No.

**WITNESS RESPONSIBLE:** Richard Stevie/Diane Jenner



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-006**

**REQUEST:**

6. The subsection concludes, "It should be pointed out that while the specific potential for cogeneration cannot be identified, the load forecast does reflect the impact of fuel switching and cogeneration which would occur due to the relative prices for alternative fuels such as oil, gas, and coal." IRP, page 3-21.
- a. What are the quantitative relationships between the factors listed above?
  - b. What is the magnitude of the impacts of these factors?
  - c. Where in the load forecast analysis do the impacts of these factors appear?

**RESPONSE:**

- a) The forecast models for the commercial and industrial sectors incorporate the relative prices of other fuels. The prices of alternate fuels may increase or decrease relative to that for electricity, thus affecting the forecasted electricity usage. If electricity prices are increasing relative to natural gas, then the forecast for electricity usage will decline (and vice versa). As stated in the IRP, the forecast captures the impacts of alternate fuel use through either fuel switching and/or cogeneration.
- b) The magnitudes have not been estimated.
- c) See responses to a) and b) above.

**WITNESS RESPONSIBLE:**

Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-007**

**REQUEST:**

7. On page 3-29 a number of residential electric appliances are listed, but computing equipment was not listed. Does ULH&P foresee a time when it will be appropriate to include home computers in the list of appliances?

**RESPONSE:**

The residential appliances listed on page 3-29 include those that use a relatively large amount of energy. It remains to be seen if home computers will become a major energy use in a typical residential household.

**WITNESS RESPONSIBLE:**

Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-008**

**REQUEST:**

8. In comparing the projected energy needs for the year 2023 on pages 3-46 and 3-48, it appears that ULH&P is projecting that the impact of DSM in that year will be a reduction of 4,371 MWh, or 0.078% of the net energy for load.
- a. Does this reflect a conclusion by ULH&P that DSM cannot cost-effectively provide more savings?
  - b. Please explain why the estimated impacts are so miniscule.

**RESPONSE:**

- a) This is an issue currently being analyzed further. There are other programs that may be cost-effective if the implementation costs can be reduced or shared with other portions of the Cinergy system.
- b) That characterization as miniscule is one of mis-interpretation and misunderstanding. The level of DSM effort in the Cinergy/ULH&P service area is based upon the set of programs and funding level agreed to by the Ky DSM Collaborative. A more extensive set of programs existed in prior IRP reports. However, in the late 1990's, when it became apparent that deregulation would affect the future viability of DSM programs, the level of funding for DSM programs was reduced to only those supported by the Residential Work Team of the Ky DSM Collaborative. The Commercial and Industrial Work Team disbanded at that time. The relatively small size of the Cinergy/ULH&P service area makes it difficult to cost-effectively provide a wide range of DSM programs. Cinergy/ULH&P has been seeking opportunities to expand the size of the DSM effort by sharing costs with other operating utilities of Cinergy. This is how Cinergy/ULH&P is able to offer the new Power Manager direct load control program. As more DSM programs are developed for Cinergy operating utilities, more will be brought to the Cinergy/ULH&P service area.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-009**

**REQUEST:**

9. In developing its IRP, did ULH&P perform a study to estimate the total quantity of demand-side energy efficiency and load shifting measures that would be available within the ULH&P service area (i.e., a technical potential study), the cost of implementing such measures, and the revenue requirements that would be needed to acquire various portions of these potential resources through DSM programs?.

**RESPONSE:**

No.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-010**

**REQUEST:**

10. Pages 4-17 describes one new DSM program to control residential air conditioners in the summer months. Did ULH&P analyze other new DSM programs for possible inclusion in the IRP? If not, please explain why not.

**RESPONSE:**

See response to KyDOE-DR-01-008.

Cinergy/ULH&P is currently in the process of evaluating additional DSM programs.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-011**

**REQUEST:**

11. Did ULH&P estimate the square footage of residential, commercial, and industrial floor space that is being newly constructed each year in its service area? If so, what are the estimated square footage figures?

**RESPONSE:**

No, ULH&P does not estimate the square footage for new construction.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-012**

**REQUEST:**

12. Did ULH&P survey the energy efficiency of the new commercial buildings being constructed in its service area? If so, please provide the results of this analysis.

**RESPONSE:**

No.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-013**

**REQUEST:**

13. The table on page 8-6 refers to the "DSM Bundle (DSM Settlement Agreement).
- a. Is the DSM Bundle the four existing DSM programs plus the new Power Manager direct load control program? If not, please describe what the DSM Bundle is.
  - b. What settlement agreement is being referenced?

**RESPONSE:**

- a) No, it includes the existing DSM programs, but excludes the Power Manager program.
- b) The reference to a DSM Settlement Agreement is incorrect and should be referring to the Ky DSM Collaborative's set of programs that have been approved by the Ky Public Service Commission.

**WITNESS RESPONSIBLE:**

Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-014**

**REQUEST:**

14. When deciding on the set of DSM programs to recommend for implementation, did ULH&P consider "the extent to which the plan provides programs which are available, affordable, and useful to all customers" [Reference KRS 278.285(1)(g)]? Please discuss the degree to which the set of DSM programs proposed for the ULH&P service territory meets this statutory criterion.

**RESPONSE:**

Yes. This is an issue addressed within the context of the KY DSM Collaborative. The members of the Collaborative discuss with Cinergy/ULH&P the funding level as well as the types of programs to be included in applications to the Commission. Concurrence by the members of the Collaborative plays a major role in the set of DSM programs offered by Cinergy/ULH&P.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-015**

**REQUEST:**

15. The method of local integrated resource planning (LIRP), as described in a strategic issues paper by E-Source (1995) titled, "Local Integrated Resource Planning: A New Tool for a Competitive Era," is designed to determine if costs could be reduced by deferring transmission and distribution upgrades through the use of geographically focused demand-side programs. [Other names for LIRP include "targeted area planning," "local area investment planning," "distributed resources planning," or "area wide asset and customer service."] Did ULH&P use the LIRP approach to determine whether any planned transmission or distribution projects could economically be deferred? If so, please provide the results of the studies.

**RESPONSE:**

No. The KY DSM Collaborative process has been used to select the DSM programs.

**WITNESS RESPONSIBLE:** Richard Stevie



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-016**

**REQUEST:**

16. East Kentucky Power Co-op has instituted a green power program whereby customers who wish to support renewable energy sources pay a price premium for electricity produced from landfill gas and other renewable technologies. Has ULH&P considered instituting a similar program to help diversify its portfolio of energy supply technologies?

**RESPONSE:**

On October 1, 2002, ULH&P implemented a KyPSC-approved rider, Rider GP, Green Power Rider, attached.

**WITNESS RESPONSIBLE:**

Don Rottinghaus

The Union Light, Heat and Power Company  
107 Brent Spence Square  
Covington, Kentucky 41011

Ky.P.S.C. Electric No. 4  
Sheet No. 88  
Page 1 of 1

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**RIDER GP**

**GREEN POWER RIDER**

**APPLICABILITY**

Applicable to all customers who want to contribute to a Company-sponsored "Green Power" fund. The term of this pilot program is three (3) years.

**DEFINITION OF GREEN POWER**

Green Power includes energy generated from environmentally friendly sources, including, but not limited to: hydroelectric generation, photovoltaic generation, solar thermal generation, wind generation, biomass generation, and methane recovery.

**NET MONTHLY BILL**

Customers who participate in this Rider will be billed for electric service under all standard applicable tariffs and riders. The customer's contribution to the Green Power fund will be added to the customer's bill for electric service.

**TERMS AND CONDITIONS**

The Customer shall enter into a written service agreement with the Company that shall specify the monthly amount that the Customer will contribute to the Green Power fund. The contribution amount must be in whole dollars with one dollar (\$1.00) being the minimum contribution allowed. Funds collected through Rider GP will be used to purchase power from environmentally friendly sources as described in the DEFINITION OF GREEN POWER section. As sufficient amounts are collected in the Green Power fund to cover the costs of purchasing and also transmitting such electric power, the Company will purchase electric power generated from environmentally friendly sources. After three (3) years, if the contributions collected have been insufficient for ULH&P to purchase or develop Green Power energy sources, the monies contributed will be refunded to respective customers including six (6) percent annualized simple interest. The Company will file with the Commission on a semi-annual basis a report which shows the number of participants, amount of funds collected in the Green Power fund and the expenditures made during the preceding six month period as contemplated in this Rider.

The term of the service agreement will be for a minimum of one year.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to the Company's Service Regulations, as filed with the Kentucky Public Service Commission.

Issued by authority of an Order of the Kentucky Public Service Commission, dated September 30, 2002 in Case No. 2002-00267.

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Issued: October 1, 2002

Issued by Gregory C. Ficke, President

Effective: October 1, 2002



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-017**

**REQUEST:**

17. Pages 8-2 and 8-3 discuss how the computer models STRATEGIST and PROVIEW were used to select optimum expansion plans based on Present Value Revenue Requirements (PVRR).
  - a. In general, was the objective to minimize the PVRR?
  - b. Does the PVRR include the cost of the fuels used to generate electricity?

**RESPONSE:**

- a. Yes.
- b. Yes.

**WITNESS RESPONSIBLE:** Diane Jenner



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-018**

**REQUEST:**

18. Pages 8-2 and 8-3 describe the way PROVIEW includes the costs associated with meeting existing emissions requirements. Certain technologies that have met the existing emissions standards nevertheless continue to emit some pollutants into the environment.
  - a. When comparing various supply-side and demand-side technologies, did ULH&P assign any costs to the emissions that each technology would cause?
  - b. For those technologies that burn coal, did ULH&P include estimates of other external costs associated with the mining, cleaning, and transporting of coal? If so, please provide the estimates of the size of these environmental impacts.

**RESPONSE:**

- a. When dispatching supply-side technologies, a market price was applied to their SO<sub>2</sub> and NO<sub>x</sub> emissions. No emissions costs were applied to demand-side technologies.
- b. No. Any external costs associated with mining, cleaning, and transporting coal should be included in the delivered price of the coal.

**WITNESS RESPONSIBLE:**

Diane Jenner



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-019**

**REQUEST:**

19. On page 8-14 the Study Period is defined as the 20-year Planning Period plus infinite end effects. Please describe what is meant by infinite end effects.

**RESPONSE:**

Infinite end effects are used to account for the cost of replacing generation resources and differences in operating costs beyond the 20-Year Planning Period. These costs are added to the to the Planning Period PVRR. Without end effects, results may be biased against commissioning capital intensive units in the latter years of the Planning Period.

**WITNESS RESPONSIBLE:** Diane Jenner



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-020**

**REQUEST:**

20. Why would there be such a large difference in PVRR between the first two options shown in the table on page 8-14?

**RESPONSE:**

The large difference in PVRR is due to the fact that in the East Bend/Miami Fort 6/Woodsdale Plan, ULH&P is acquiring assets at book value, which is lower than the market price.

**WITNESS RESPONSIBLE:** Diane Jenner



**Kentucky Division of Energy's 1<sup>st</sup> Set Data Requests**

**Case No. 2004-00014**

**Date Received: June 16, 2004**

**Response Due Date: July 7, 2004**

**KyDOE-DR-01-021**

**REQUEST:**

21. The note after the table states emphatically that the PVRRs should not be viewed as absolute values. Please explain why.

**RESPONSE:**

The modeling performed in the IRP process does not include items such as T&D rate base and expenses, corporate A&G, etc. which are not relevant to determine the least cost generation supply plan to serve ULH&P's customers (because these cost items are common to all plans). In addition, ULH&P's rates will continue to be frozen at their current levels until 2007.

**WITNESS RESPONSIBLE:** Diane Jenner